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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,566	09/25/2003	Max I. Gurth	8647-PA04	4011

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EXAMINER	
HANAN, DEVIN J	

ART UNIT	PAPER NUMBER
3745	

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/669,566	GURTH, MAX I.	
	Examiner	Art Unit	
	Devin Hanan	3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *amendment filed 8/12/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *6,8,9,18-20 and 22* is/are allowed.

6)☒ Claim(s) *1-5,7,10-17 and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *9/25/2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, received 8/12/2005, with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, 7, 10-17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zagar et al. (U.S. Patent 4,634,344) in view of Possell (U.S. Patent 4,347,032)

Zagar et al. discloses a rotary disc pump (figure 7) for pumping fluid materials with a housing (12) having a front wall (40) and a back wall (14)

an impeller mounted co-axially within said chamber and comprising a shaft (32) mounted in a back wall of said housing and having an outer end extending from a housing and an inner end within said chamber, at least a first circular disc (disc 41 that abuts housing wall 14) mounted on the inner end of a shaft, and at least a second disc (disc next to the first circular disc) mounted in axially spaced relation to a first disc and

having an opening in the center thereof (member 34 protrudes through the opening); and

a converging member (34) extending co-axially of a shaft from a first disc converging toward a point at least one half the distance to a second disc (extends past more than 2 discs).

However, Zagar et al. does not specifically (Zagar et al. does mention the impeller has an appropriate housing, abstract lines 1-4) disclose a peripheral wall joining the front and back walls forming a chamber with a generally coaxial inlet in a front wall and a generally tangential outlet formed in the peripheral wall.

Possell 032 teaches of a peripheral wall joining the front and back walls forming a chamber with a generally coaxial inlet in a front wall (10) and a generally tangential outlet (36) formed in the peripheral wall (14) for the purpose of communicating with an outwardly expanding tubular diffuser (col. 3 lines 27-31).

Since Zagar et al. and Possell 032 are from the same field of endeavor, abrasive material pumps with discs, the purpose disclosed by Possell would have been in the pertinent art of Zagar et al. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add the peripheral wall and tangential outlet of Possell to the abrasive materials pump of Zagar et al. for the purpose of communicating with an outwardly expanding tubular diffuser (col. 3 lines 27-31).

Regarding claim 2, the apparatus of Zagar et al. as modified by Possell 032 discloses all of the claimed limitations of claim 1 and a converging member (34) with a

conical surface and extends at least to an inner surface of said second disc (second disk 41).

Regarding claim 3, the apparatus of Zagar et al. as modified by Possell 032 discloses all of the claimed limitations of claim 1 and a conical member (34) extending beyond a second disc.

Regarding claim 4, the apparatus of Zagar et al. as modified by Possell 032 discloses all of the claimed limitations of claim 3 and a conical member (34) extending beyond a second disc to at least a third disc.

Regarding claim 5, the apparatus of Zagar et al. as modified by Possell 032 discloses all of the claimed limitations of claim 3 and a conical member is a frustum of a cone (figure 7).

Regarding claim 7, the apparatus of Zagar et al. as modified by Possell 032 discloses all of the claimed limitations of claim 1 and a conical member is a frustum of a cone (figure 7).

Regarding claims 10 and 11, since the applicant has not disclosed that having a converging member with a concave or convex shape solves any stated problem or is for any particular purpose above the fact that it is a design choice and it appears that the design of Zagar et al. would perform equally well with the rotary disc pump as claimed by applicant, it would have been an obvious matter of engineering expedience to further modify the centrifugal pump of Zagar et al. by including the concave or convex shape as claimed for the purposes of a design choice.

Regarding claim 12, the apparatus of Zagar et al. as modified by Possell 032 discloses all of the claimed limitations as discussed in claim 1 above.

Regarding claim 13, the apparatus of Zagar et al. as modified by Possell 032 discloses all of the claimed limitations of claim 12 and a conical member that extends at least to an inner surface of the second disc (extends past all discs 41).

Regarding claim 14, the apparatus of Zagar et al. as modified by Possell 032 discloses all of the claimed limitations of claim 12 and a conical member extends at least to an outer surface of the second disc (extends past all discs 41).

Regarding claim 15, the apparatus of Zagar et al. as modified by Possell 032 discloses all of the claimed limitations of claim 12 and a rotor has an outer disc (disc 41 closest to housing 40) and conical member (34) extending at least to an inner surface of the outer disc.

Regarding claim 16, the apparatus of Zagar et al. as modified by Possell 032 discloses all of the claimed limitations of claim 15 and the conical member extends at least to an outer surface of said outer disc (extends past all discs 41).

Regarding claim 17, the apparatus of Zagar et al. as modified by Possell 032 discloses all of the claimed limitations of claim 16 and the conical member extends beyond an outer surface of the outer disc (extends past all discs 41).

Regarding claim 21, the apparatus of Zagar et al. as modified by Possell 032 discloses all of the claimed limitations of claim 12 above and the conical member is a frustum of a cone (figure 7, 34).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zagar et al. (U.S. Patent 4,634,344) in view of Possell (U.S. Patent 4,347,032) and further in view of Possell (U.S. Patent 5,192,182)

The apparatus of Zagar et al. as modified by Possell 032 discloses all of the claimed limitations of as discussed in claim 1 with the exception of a concave converging member.

Possell 182 teaches of a concave converging member for the purpose of directing the air radially outward (col. 2 lines 54-57).

Since Zagar et al. and Possell 182 are from the same field of endeavor; rotary disc pumps, the purpose disclosed by Possell 182 would have been in the pertinent art of Zagar et al. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the concave converging member of Possell 182 to the rotary disc pump of Zagar et al. for the purpose of directing the air radially outward (col. 2 lines 54-57).

Allowable Subject Matter

Claims 6, 8-9, 18-20 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devin Hanan whose telephone number is 571-272-6089. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on 571-272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Devin Hanan
Patent Examiner
Art Unit 3745

EDWARD K. LOOK
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9/22/05